



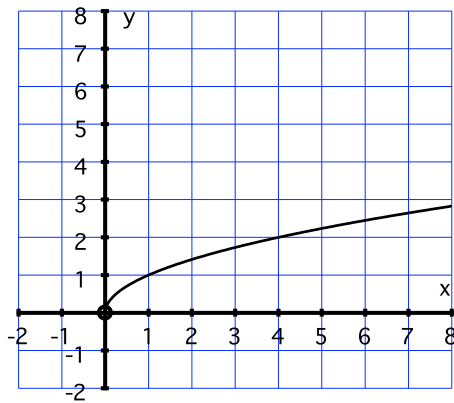
Graphical Transformations



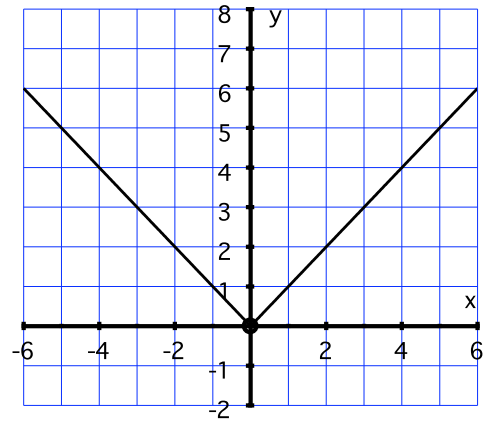
Investigation:

- Sketch each of the functions on the same set of axes as its parent graph.
- Your graphs should include a number of clearly identifiable points.
- Describe the changes that have occurred in reference to the parent graph.

(a) $f(x) = \sqrt{x} + 2$

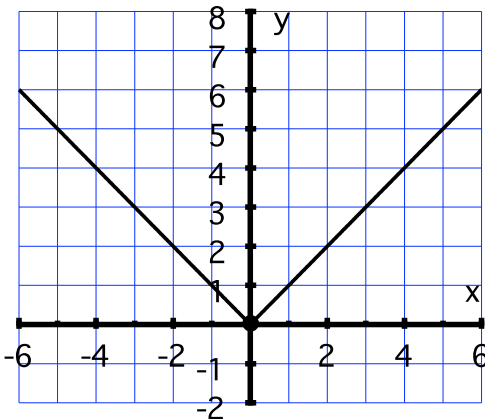


(b) $f(x) = |x + 2|$

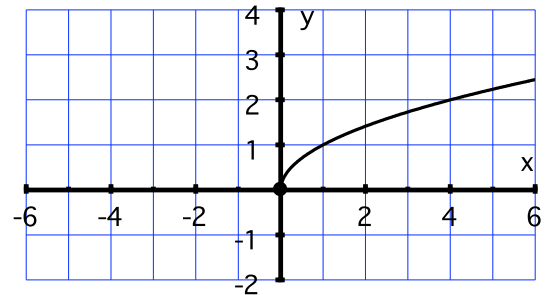


Describe the changes that you see:

(c) $f(x) = 2|x|$



(d) $f(x) = \sqrt{-x}$



Describe the changes that you see:

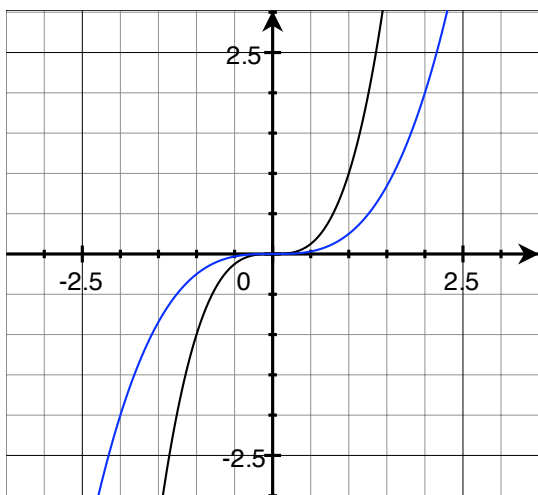




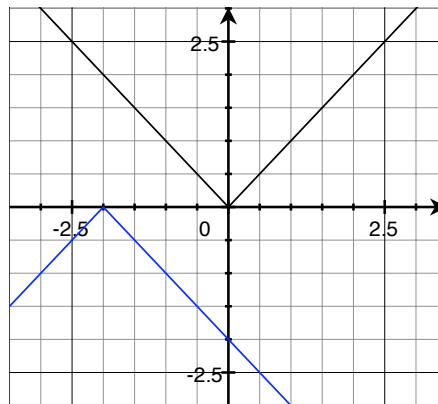
Investigation:

- Give an equation for each transformed graph in blue, the parent graph is given.

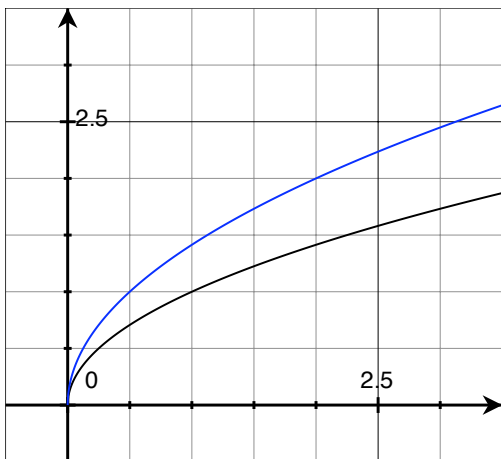
(a) _____



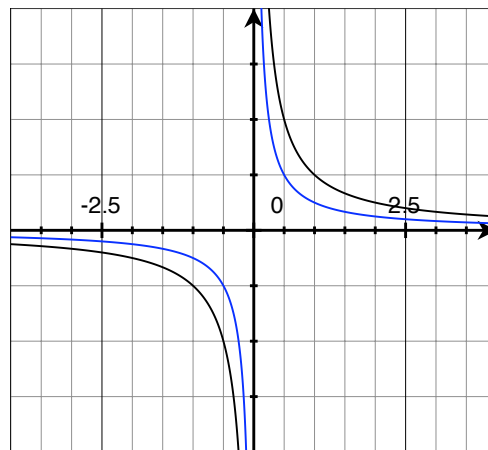
(b) _____



(g) _____



(h) _____





Complete the following table, summarizing the findings of the investigation.

Type	Change to Parent Function	Change to Parent Graph
	$y = -f(x)$	
	$y = f(-x)$	
	$y = f(x) + c$	
	$y = f(x) - c$	
	$y = f(x + c)$	
	$y = f(x - c)$	
	$y = cf(x), c > 1$	
	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	
	$y = f(cx), c > 1$	
	$y = f(cx), 0 < c < 1$	

1. Describe and graph the function $f(x) = -\frac{1}{2}|x - 3| + 4$.

Description:

